

REMARKS

This Reply is in response to the Final Office Action mailed on February 3, 2005 in which Claims 52 and 53 were allowed; in which Claims 11-14, 34-37 and 43-51 were objected to; and in which Claims 1-10, 15, 17-33, 38 and 40-42 were rejected. With this response, entry of amendments canceling Claims 6 and 29; amending Claims 11, 19 and 46; and rewriting objected to Claims 11 and 34 as added independent Claims 54 and 55 is requested. Upon entry of such amendments, Claims 1-5, 7-15, 17-28, 30-38 and 40-55 are requested.

I. Objection to Claims 6, 11, 19, 29 and 46.

Paragraph 1 of the Office Action objected to Claims 6, 11, 19, 29 and 46 based upon several informalities. In response, Claims 6 and 29 are cancelled. Claims 11, 19 and 46 are amended to address the noted informalities. Since these are the only amendments to the currently pending set of claims (besides rewriting objected to dependent claims in independent form), no new issues are believed to be raised by such amendments and entry of such amendments is requested.

II. Obviousness-Type Double Patenting Rejection of Claims 1-15, 17-19 and 26-38.

Paragraph 3 of the Office Action rejected Claims 1-15, 17-19 and 26-38 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claims 1-20 of U.S. Patent No. 6,728,101. In particular, the Office Action asserts that "Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 2-12, 14-15 and 17-18 are identical with claims 2-14 and 16-17 of '101; claims 1, 13 and 19 are covered by claims 1, 6 and 15 of '101."

Applicant respectfully traverses the rejection of Claims 1-15, 17-19 and 26-38 under the judicially created doctrine of obviousness-type double patenting. In particular, Claims 1-15, 17-19 and 26-38 of the present application are patentably distinct from the subject matter recited in Claims 1-20 of U.S. Patent No. 6,728,101.

Each of Claims 1-15, 17-19 and 26-38 recites a flow control member having a lower surface opposite the second edge of the first card and spaced less than 10 mm from the second edge. None of Claims 1-20 of U.S. Patent No. 6,728,101 recite this limitation. Because each of Claims 1-15, 17-19 and 26-38 of the present application include a limitation which is not found in any of Claims 1-20 of U.S. Patent No. 6,728,101, Claims 1-15, 17-19 and 26-38 of the present application are patentably distinct over Claims 1-20 of U.S. Patent No. 6,728,101. Thus, the double patenting rejection is improper and should be withdrawn.

Paragraph 3 of the Office Action appears to incorrectly characterize the law of non-statutory double patenting. Even assuming, arguendo, that Claims 2-12, 14-15 and 17-18 of the present application are identical with Claims 2-14 and 16-17 of U.S. Patent No. 6,728,101 as alleged in the Office Action, such claims are dependent claims and depend from distinct independent claims. Moreover, even assuming, arguendo, that Claims 1, 13 and 19 of the present application are "covered" by Claims 1, 6 and 15 of U.S. Patent No. 6,728,101, this is not the test for non-statutory double patenting. Non-statutory double patenting rejection is not justified simply because one patent has broader claims that may cover more specific, potentially more narrow claims of another patent. The issue is whether such claims are patentably distinct from one another. Because Claims 1-15, 17-19 and 26-38 of the present application are patentably distinct from Claims 1-20 of U.S. Patent No. 6,728,101, Applicant requests that non-statutory double patenting rejection be withdrawn.

III. Rejection of Claims 1-10, 15, 17-18 and 41-42 Under 35 U.S.C. § 103(a) Based Upon Bachman.

Rejection of Claims 19, 22, 24, 26-33 and 38 Under 35 U.S.C. § 103(a) Based Upon Bachman.

Paragraph 5 of the Office Action rejected Claims 1-10, 15, 17-18 and 41-42 under U.S.C. § 103(a) as being unpatentable over Bachman et al., U.S. Patent No. 5,923,531. Paragraph 6 of the Office Action rejected Claims 19, 22, 24, 26-33

and 38 under 35 U.S.C. § 103(a) as being unpatentable over Bachman et al., U.S. Patent No. 5,923,531. With this response, entry of amendments canceling Claim 6 is requested. Based solely on the remarks which follow, Applicant requests that the rejection of such claims based upon Bachman et al. be withdrawn.

Independent Claim 1 recites a card support assembly which includes a plurality of printed heat generating circuit cards coupled to the support member, extending non-parallel from the support member and arranged end-to-end. The cards, collectively, have a front edge longitudinally spaced from a rear edge. The assembly further includes at least one flow control member that is substantially imperforate from the front edge to the rear edge. The at least one flow control member has a lower surface opposite an edge of one of the cards that is spaced less than 10 mm from the edge.

Claim 41 recites a method for assembling a card support. The method includes mounting a plurality of printed heat generating circuit cards in an end-to-end or staggered relationship to a support member, wherein the cards collectively have a first end edge longitudinally spaced from a second end edge. The method further includes mounting at least one flow control member proximate the plurality of cards and spaced from the cards by less than 10 mm.

Independent Claim 19 recites a computing device which includes a first circuit board, a second circuit board, a plurality of printed heat generating circuit cards directly coupled to the second circuit board and at least one flow control member facing the second circuit board. The plurality of printed heat generating circuit cards extend non-parallel from the second circuit board and include first and second cards arranged in an end-to-end relationship or staggered relationship, wherein the plurality of cards, collectively, have a front edge longitudinally spaced from a rear edge. The at least one flow control member is substantially imperforate from the front edge to the rear edge and has a lower surface opposite an edge of one of the cards that is spaced less than 10 mm from the edge.

Bachman fails to disclose or suggest a card support assembly which includes a plurality of printed heat generating circuit cards arranged end-to-end and a flow control member that is substantially imperforate from a collective front edge to a collective rear edge of the cards, wherein the lower surface of the flow control member is spaced less than 10 mm from an edge of one of the cards.

As set forth in the present application, because the lower surface is spaced less than 10 mm from the edge, adequate control of air flow past the cards is ensured. (See pg. 6, lines 3-4). As a result, the flow control member cooperates with the support member and the cards to form ducting directing air flow to more effectively cool the cards. (See pg. 6, lines 8-12).

Page 5 of the Office Action acknowledges that “Bachman fails to indicate the space between the lower surface of the at least one flow control member and the second edge of the first card being less than 10 mm.” However, page 5 of the Office Action further asserts that:

It would have been an obvious matter to one having ordinary skill in the art at the time the invention was made to set the space between the lower surface of the at least one flow control member and the second edge of the first card being less than 10 mm for less cooling air leakage.

Thus, the only motivation that the Office Action offers for modifying Bachman such that the lower surface of cage 12 is spaced less than 10 mm from the edge of DIMMs 40 is “for less cooling air leakage.” However, the Office Action fails to cite where such motivation would originate. As noted in the previous response, no where does Bachman et al. disclose or suggest that the top of the cage is spaced less than 10 mm from the edges of DIMMs 40.

Moreover, no where does Bachman et al. provide any motivation or suggestion for preventing air flow around DIMMs 40. In fact, Bachman appears to teach away from such a modification. Page 5, lines 60-64 states that “each memory riser card 18 can accommodate a plurality of electrical components, for example, up to 16 Dual In-Line Memory Modules 40 (DIMMs).” Column 3, lines 37-45 specifically

states that air openings are sized and arranged “so that the flow of air passes directly around the electrical component to be cooled. By sizing the air flow openings to accommodate the varying needs of the electrical components, only the proper flow of cooling air will be allowed to pass there through, with the flow of air passing directly around the electrical component to be cooled.” (Emphasis added). Thus, one of the main objectives of Bachman appears to be the creation of the air flow around electrical components such as DIMMs 40. To modify Bachman as suggested in the Office Action such that the edges of DIMMs 40 are less than 10 mm from the top of cage 12 would appear to contradict the specific teachings of Bachman. The only apparent source for the motivation of positioning DIMMs 40 within or less than 10 mm from the top of cage 12 “for less cooling air leakage” would appear to be from Applicants’ own disclosure. Such hindsight reasoning is improper.

In its assertion that it would be obvious to modify Bachman such that the edge of DIMMs 40 are less than 10 mm from the top of cage 12, the Office Action further asserts that “a mere change in size is generally recognized as being within the level of ordinary skill in the art. MPEP § 2144.04, IV A.” However, MPEP § 2144.04, IV A is not applicable and does not support the rejection of Claims 1-10, 15, 17-18 and 41-42 based upon Bachman under 35 U.S.C. § 103. MPEP § 2144.04, IV A correctly stands for the proposition that where a device having claimed relative dimensions or size does not perform differently than a prior art device, the claim device may not be patentably distinct from the prior art device. (See MPEP § 2144.04, IV A citing Gardner v. Tec Systems, Inc., 725 Fed.2d 1338 (Fed. Cir. 1984), cert. denied, 469 U.S. 830 (1984)). The fact that the flow control member has a surface opposite the edge of the first card that is spaced less than 10 mm from the edge is not merely a change in size which does not result in any different performance. Once again, as set forth in the present application, because the lower surface of the flow control member is spaced than 10 mm from the edge of the card, adequate control of air flow passed the card is ensured. (Specification, pg. 6, lines 3-4). As a result, the flow control member effectively cooperates with the

support member and the cards to form ducting directing air flow to more effectively cool the cards. (Spec., pg. 6, lines 8-12).

Moreover, to increase the size of DIMMs 40 may presumably also result in the rest of the computer of Bachman also being proportionately increased and would not result the top of such DIMMs being spaced any closer to the top of cage 12. Because the recitation of the flow control member having a surface spaced less than 10 mm from an edge of the card is not a mere change in size and further because the Office Action has failed to cite any source of motivation for the hypothetical modification of Bachman alleged in the Office Action, the rejection of Claims 1-10, 15, 17-18 and 41-42 is improper and should be withdrawn. Likewise, the rejection of claims 19, 22, 24, 26-33 and 38 under 35 U.S.C. 103 § (a) based upon Bachman et al. and should be withdrawn.

IV. Rejection of Claims 20-21, 23, 25 and 40 Under 35 U.S.C. § 103 Based Upon Bachman and Marconi.

Paragraph 7 of the Office Action rejected Claims 20-21, 23, 25 and 40 under 35 U.S.C. § 103(a) as being unpatentable over Bachman et al., U.S. Patent No. 5,923,531, in view of Marconi et al., U.S. Patent No. 5,991,163. Claims 20-21, 23, 25 and 40 depend from Claim 19 and overcome the rejection for the same reasons discussed above with respect to the rejection of Claim 19.

V. Added Claims.

Paragraph 9 of the Office Action indicated that Claims 11-14, 34-37 and 43-51 would be allowable if rewritten in independent form including of the limitations of the base claim and any intervening claims. In response, Applicants request entry of amendments canceling Claims 6 and 29. Applicant further requests entry of amendments rewriting objected to Claims 11 and 34 in independent form including all of the limitations of base Claims 1 and 19, respectively, as added independent claims 54 and 55. Since added Claims 54 and 55 are merely rewritten forms of

objected to Claims 11 and 34, no issues are believed to have been raised. Accordingly, entry of the amendments adding Claims 54 and 55 is requested.

VI. Conclusion.

Upon entry of the amendments as set forth above, claims 1-5, 7-15, 17-28, 30-38 and 40-55 will be pending in this application.

Applicant believes that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 08-2025. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 08-2025. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 08-2025.

Respectfully submitted,

Date April 4, 2005

By Todd A. Rathe

FOLEY & LARDNER LLP
Customer Number: 22879
Telephone: (414) 297-5710
Facsimile: (414) 297-4900

Todd A. Rathe
Attorney for Applicant
Registration No. 38,276